

TWO NEW SPECIES OF CALLISTEMON R.Br. (MYRTACEAE)

by

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ABSTRACT

Spencer, R. D. & Lumley, P. F. Two new species of *Callistemon* R.Br. (Myrtaceae). *Muelleria* 6(4): 293-298 (1986). — The new species *Callistemon pearsonii* from the Blackdown Tableland, Queensland and *C. pauciflorus* from Central Australia are described and illustrated together with notes on their distribution, habitat and diagnostic features.

INTRODUCTION

The two species described here are generally recognised as distinct but have never been formally described. One of them, *C. pearsonii*, is also cultivated as an ornamental plant. It is therefore considered desirable to make names available for them prior to completion by the authors of a more detailed generic treatment.

TAXONOMY

Callistemon pearsonii R. D. Spencer & P. F. Lumley, sp. nov.

Callistemon sp. "Blackdown". M. Hodge *et al.*, Hort. Guide Austral. Pl. set 5, sheet 6 with plate. Soc. Growing Austral. Pl. (1979).

Callistemon species (Blackdown Tableland). W. R. Elliot & D. L. Jones, Encycl. Austral. Pl. 2:423 (1982).

Callistemon sp., Blackdown *Callistemon*. K. A. W. Williams, Native Pl. Queensland, ed. 3, 1:48, plate p. 49 (1984).

Frutex rigidus effusus usque 1 m. altus, raro usque 2 m. *Ramuli* rigidi. *Surculi juvenes* subrosei viridiscentes sericei. *Cortex* leviter fissuratus fuscus. *Folia* sessilia vel petiolo 1 (2) mm. longo, rigida coriacea plus minusve linearia vel anguste oblanceolata interdum subulata saepe subfalcata (10)15-25(30) mm. longa et (1.5)2-3(4) mm. lata, pungenti mucrone rufo 0.5-1 mm. longo, costa et venis marginalibus aliquantum prominentibus apprime supra, venis lateralibus sub angulo 45° patentibus, obscuris apprime infra, glandulis sparsis praecipue infra. *Conflorescentia* saepe frondosa 20-30(40) mm. longa et 45-50(55) mm. lata, axe pubescenti. *Bracteae* caducae, anguste vel late lanceolatae, striatae, ferrugineae. *Bracteolae* non visae. *Perigynium* 2-3 mm. longum, glabrum. *Sepala* late ovata 2 mm. longa et 2-3 mm. lata, primo plerumque ciliata, viridula. *Petala* 5, ovata, in basem contracta, 4 mm. longa et 4 mm. lata, primo ciliata, viridia saepe suffusa rosea. *Stamina* libra, plerumque 40-45; filamenta 18-23 mm. longa, coccinea; antherae c. 0.75 mm. longa, aureae, glande prominenti. *Ovarium* triloculare tomentosum supra. *Stylus* plerumque stamina superans interdum fere 7 mm. longior. *Stigma* capitatum. *Fructi* globosi, primo anno c. 6 mm. longi et 5 mm. lati, orificio c. 25 mm. lato. *Semen* angulare, c. 1 mm. longum.

TYPUS: Queensland, Blackdown Tableland. Mimoso Creek, 23°38'S., 149°00'E., 14.x.1984, R. D. Spencer 84 (HOLOTYPUS: MEL 1535969. ISOTYPI: BRI, NSW).

Shrub stiff, low and spreading, mostly less than 1 m tall, rarely to 2 m; small plants quite densely branched; new growth sericeous, pale pink, soon becoming green. *Bark* shallowly fissured, dark. *Leaves* densely distributed, sessile or with a short petiole 1(2) mm long; lamina stiff and coriaceous, more or less linear to narrow-oblanceolate, sometimes subulate, often slightly falcate, (10)15-25(30) mm long, (1.5)2-3(4) mm wide, pungent with a reddish-brown mucro 0.5-1 mm long; marginal veins and midrib slightly raised, more so on upper surface; lateral veins at an angle of about 45° to midrib, obscure though more distinct on upper surface; oil glands few, mostly on the lower surface. *Conflorescence* usually distally frondose, 20-30(40) mm long, 45-50(55) mm wide; axis finely pubescent. *Bracts* narrow- to broad-lanceolate, striate, reddish-brown, chartaceous, caducous. *Bracteoles* not

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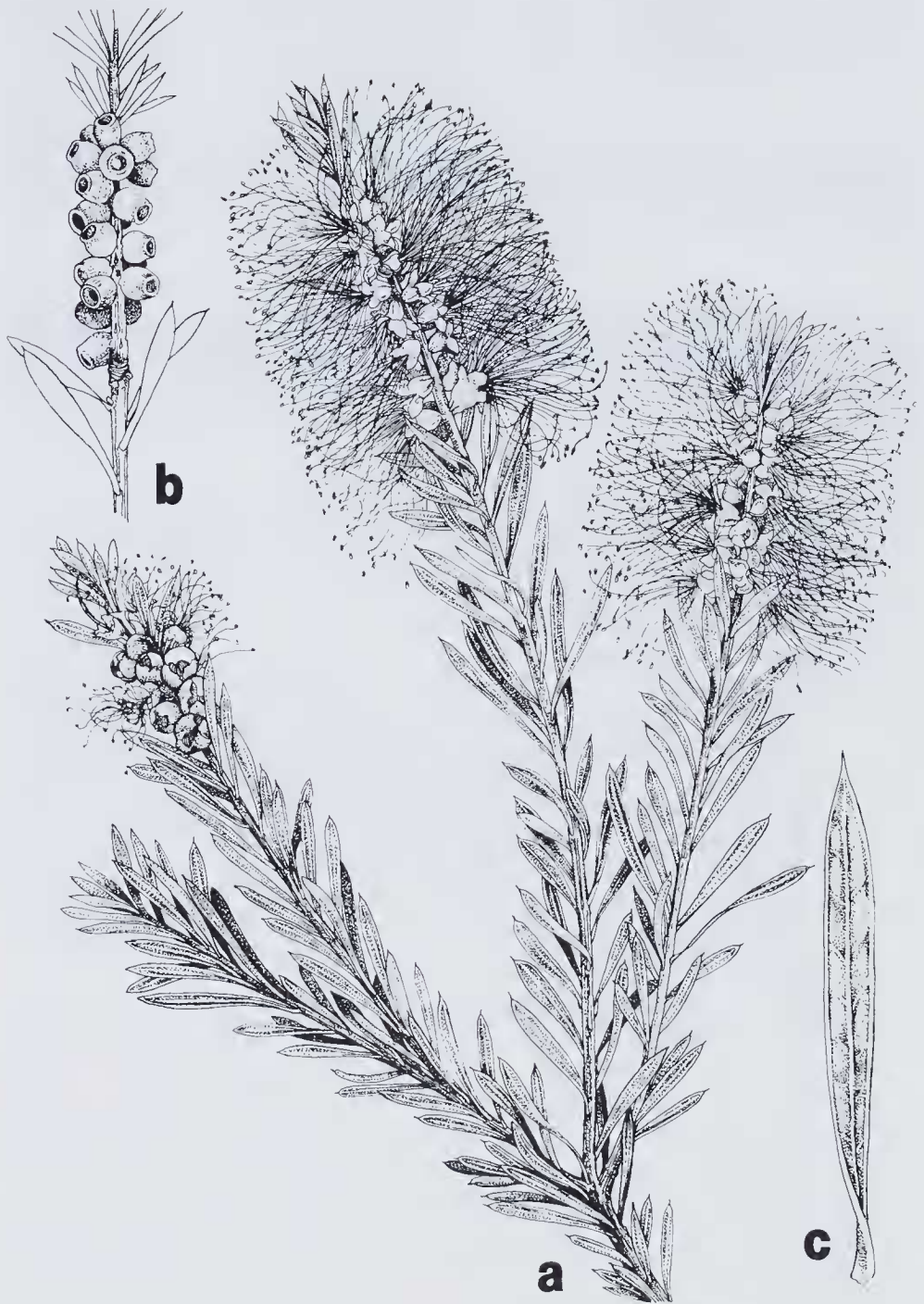


Fig. 1. *Callistemon pearsonii*. a — flowering twig, x 1. b — fruits, x 1. c — upper surface of leaf, x 3. All from Spencer 84 (MEL 1535969).

seen. *Perigynium* 2-3 mm long, glabrous. *Sepals* depressed- to very broad-ovate, 2 mm long, 2-3 mm wide, generally ciliate at first, greenish. *Petals* very broadly ovate, slightly contracted towards the base, 4 mm long, 4 mm wide, ciliate at first, green often with pink tinge. *Stamens* mostly 40-45, 18-23 mm long; filaments free, deep red; anthers c. 0.75 mm long, bright yellow, gland prominent. *Ovary* trilobular, tomentose on upper surface; style generally exceeding the stamens, sometimes by up to 7 mm, deep red; stigma capitate. *Fruit* globose, occasionally truncate-globose, c. 5 mm long and 6 mm wide in first year; orifice c. 3 mm wide. *Seed* c. 1 mm long, angular.

DISTRIBUTION:

Queensland. Found only on the Blackdown Tableland where frequent along Mimosa and Rainbow Creeks and in heathland.

ECOLOGY:

In open heath on shallow sandy soils which are subject to periodic flooding and along rocky sandstone of permanent creeks at an altitude of 700-900 m; more rarely in heathland or open eucalypt forest. Flowering time: October to December. Conservation status: although of restricted distribution this species is locally frequent and not considered to be in any danger.

REPRESENTATIVE SPECIMENS (total number examined, c. 20):

Queensland (*Leichardt District*) — Blackdown Tableland, -.ix.1937, *Simmonds* 62 (BRI 287829, BRI 287830); Blackdown, -.v.1962, *Gittins* 460 (NSW); Blackdown, -.ix.1965, *Gittins* S/75 (NSW); c. 32 km SE. of Blackwater (campsite on Mimosa Creek), alt. 600-900 m, 17.iv.1971, *Henderson, Andrews & Sharpe* 586 (NSW); Sandstone banks of Mimosa Creek, 4.xi.1973, *Williams* 341 (BRI 160737, BRI 160738, BRI 160739).

NOTES:

A distinctive and attractive species most closely resembling *C. subulatus* from which it differs chiefly in having a shorter and less frondose confluence, leaves with raised midrib and marginal veins, darker coloured filaments and yellow anthers. The anthers of *C. subulatus* are dark crimson.

The specific epithet commemorates the work of Queensland National Parks and Wildlife Service Ranger Steven Pearson who, with his wife Alison, has extensively collected, catalogued and photographed the remarkable flora of the Blackdown Tableland.

C. pearsonii is known locally on the Blackdown Tableland as "Rainbow Callistemon". It was introduced to cultivation from seed collected by Mr K. A. W. Williams in 1973 (Williams 1984).

Callistemon pauciflorus R. D. Spencer & P. F. Lumley, sp. nov.

Callistemon sp. A. S. George in J. P. Jessop (ed.), Fl. Central Austral. 253, t. 334 (1981).

Frutex vel interdum arbor effusa 2-3(10) m. altus. *Ramuli* flexuosi, penduli. *Surculi juvenes* confluentian sub anthesi paulo superantes primo rosei sericei. *Cortex* leviter fissuratus fuscus. *Folia* forma et amplitudine variabilia, sessilia vel petiolo usque 3 mm. longo, anguste rhombica, saepe falcata versus apicem et basem attenuata, (20)60-90(120) mm. longa et (2)5-8(12) mm. lata, glauca, infirme pungentia mucrone 1-2 mm. longo, venis lateralibus sub angulo 30°-45° e costa abeuntibus, raro minus, reticulatis vel aliquando obscuris, venis intramarginalibus et costa prominulis, glandulis praecipue infra, relative inconspicuis. *Con-florescentia* relative pauciflora (10)20-40(50) mm. longa et 22-25 mm. lata, saepe frondosa, versus apicem axis pubescenti. *Flores* apicem versus conforescentiae sub angulosa c. 45° inclinatae. *Bractea*e caduceae, anguste vel late lanceolatae, striatae, chartaceae, ferrugineae. *Bracteolae* ovatae usque lanceolatae, concavae, infra villosae, supra glabrae (basi pubescenti excepto), c. 0.7 mm. longae et c. 0.7 mm. latae, margine ciliato. *Perigynium* truncatum in basi, dense cinereosericeum, c. 3 mm. longum et 2 mm. latum. *Sepala* c. 1.5 mm. longa et 2 mm. lata, infra dense pubescentia, supra pubescentia, margine ciliato. *Petala* viridia, concava, basi paulo attenuata c. 2 mm. longa et 3 mm. lata, plus minusve glabra, margine ciliato. *Stamina* (40)45-69(70) mm. longa, filamentis libris vel interdum brevissime et irre-

gulatim conjunctis, (5)8-9(10) mm. longis, roseis interdum cremeis, antheris c. 0.75 mm. longis, subroseis vel flavis, glande prominenti. *Ovarium* supra tomentosum, triloculare. *Stylus* longior quam stamina, 10-12 mm. longus, pallidus vel supra subroseus. *Stigma* capitatum. *Fructi* plerumque exuti primo vel secundo anno, glabri, globosi vel truncati, fusci, orificio minimum latitudine $\frac{1}{2}$ fructi. *Semen* angulare, c. 0.75 mm. longum.

TYPUS: Northern Territory, Central Australia. Serpentine Gorge, Heavitree Range, 23°45'S., 132°58'E., 5.viii.1985, *H. I. Aston 2564* (HOLOTYPUS: MEL 1536620. ISOTYPI: CANB, MEL 1536618, MEL 1536619, NT, PERTH).

Shrub or occasionally straggling tree 2-3(10)m tall; branchlets flexuose, pendulous; new growth sericeous, slightly exceeding confluence at flowering, pink at first. *Bark* shallowly fissured, dark. *Leaves* variable in shape and size, sessile or with petiole to about 3 mm long, narrowly rhombic, often falcate, attenuate to the base and apex, (20)60-90(120) mm long, (2)5-8(12) mm wide, glaucous, weakly pungent with a mucro 1-2 mm long; lateral veins inclined at 30°-48° to the midvein, rarely less; intramarginal veins and midrib distinct; lateral veins reticulate or occasionally obscure; oil glands relatively inconspicuous, more numerous on the lower surface. *Confluence* generally distally frondose, (10)20-40(50) mm long, 22-25 mm wide; flowers rather distant, mostly less than 20, inclined to axis at an angle of c. 45°; axis finely pubescent. *Bracts* narrow- to broad-lanceolate, striate, reddish-brown, chartaceous, caducous. *Bracteoles* when present broad-ovate to lanceolate, concave, c. 0.7 mm long, c. 0.7 mm wide, long-pubescent on outer surface, glabrous within except at the base; margin ciliate, *Perigynium* truncate at base, c. 3 mm long, 2 mm wide, densely grey-sericeous. *Sepals* c. 1.5 mm long, c. 2 mm wide, densely pubescent without, pubescent within; margin ciliate. *Petals* concave, slightly narrowed at the base, c. 3.5 mm long, c. 3 mm wide, more or less glabrous on both surfaces, green; margin ciliate. *Stamens* (40)45-60(70); filaments free or occasionally shortly and irregularly united at the base, (5)8-9(10) mm long, deep pinkish-red, less commonly pale yellow; anthers c. 0.75 mm long, pale pink or yellow, with prominent gland. *Ovary* trilocular, tomentose on upper surface; style generally exceeding the stamens, 10-12 mm long; stigma capitate. *Fruit* globose, occasionally truncate-globose, 3(4) mm long, 3(5) mm wide, smooth, grey-brown and mostly shed in first or second year; orifice c. 2 mm wide. *Seed* c. 0.75 mm long, angular.

DISTRIBUTION (Fig. 3):

Northern Territory (Central Australia). Macdonnell, Petermann and Harts Ranges.

ECOLOGY:

Among sandy or rocky (quartzite) edges of pools and waterholes or in steep, sheltered gullies and rocky gorges. Flowering time: irregular, December to August. Conservation status: not under threat.

REPRESENTATIVE SPECIMENS (total number examined, c. 30)

Northern Territory — Serpentine Gorge, Alice Springs, -v.1963, *Funk s.n.* (BRI 038676); Kings Canyon, 10.xii.1968, *Latz 279* (NT 15809, BRI 112004, BRI 112005); 24°56'S., 129°20'E. Ewallaura Waterhole, N. side of Petermann Ranges, 19 miles E. of Docker Creek Settlement, 19.i.1969, *Maconochie 678* (NT 15607); 23°24'S., 131°34'E., Mt Crawford, Haast Bluff Stn, 14.xii.1977, *Latz 7561* (NT 64786, BRI; CBG n.v.); 24°58'S., 129°19'E., Mannanana Range, E. of Ruined Ramparts, 20.iii.1983, *Kalotas 1519* (NT 76181). Arid Zone Research Institute, Alice Springs, from a plant in cultivation, originally collected as a seedling from Serpentine Gorge, 20.xii.1973, *Maconochie 1933* (BRI, NT; also AD, CANB, CBG, DNA, K, NSW, PERTH, all n.v.).

NOTES:

An arid zone species characterised by the short confluences with few (rarely more than 20) deep pink or occasionally yellow flowers distinctly angled on the axis, the tendency of the stamens to adhere shortly at the base and the grey-



Fig. 2. *Callistemon pauciflorus*. a — flowering twig, x 1. b — perigynium, x 10. From *Latz 7561* (BRI 264343).

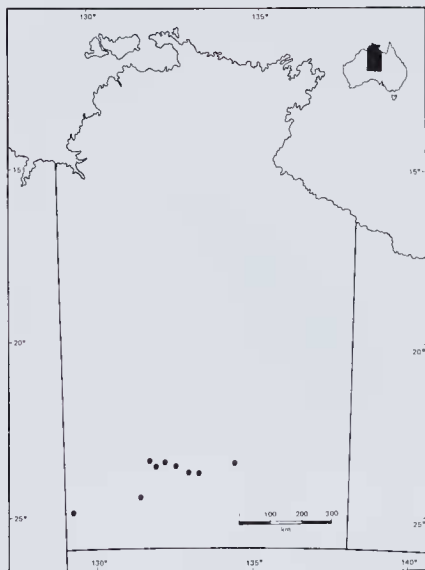


Fig. 3. The known distribution of *Callistemon pauciflorus*.

sericeous perigynium. Its closest affinities are with what is currently incorrectly known as *C. paludosus* F. Muell., but *C. pauciflorus* differs in the above characters and also in having generally larger, more glaucous and loosely dispersed leaves and in having the perigynium basally attenuate with an indumentum of appressed hairs. In contrast, the perigynium indumentum of pubescent specimens of *C. paludosus* is more woolly and erect. The presence of stamens occasionally shortly united at the base shows affinities with *C. viminalis*. However, typical plants of *C. viminalis* differ quite markedly from *C. pauciflorus* in having more linear leaves, much longer crimson stamens with dark anthers and larger, more truncate fruits.

Yellow-flowered specimens have only been collected from the Talipata Gorge (Palmer Range) and Mount Sonder.

ACKNOWLEDGEMENTS

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REFERENCE

- Williams, K. A. W. (1984). 'Native Plants of Queensland', ed. 3, vol. 1: 48. (K. A. W. Williams: N. Ipswich).